

Abstract of the Disclosure

Methods of fabricating an optical fiber preform and a method of fabricating an optical fiber of the invention realize the fabrication of an optical fiber having desirable transmission characteristics in the entire wavelength range of about 1.3 to 1.6 μm . The fabrication method comprises a porous core rod producing step of depositing a first cladding (3) having an outer diameter D so as to surround a core (2) having an outer diameter d to produce a porous core rod (1) of $D/d \geq 4.0$ by VAD. Then, the porous core rod (1) is dehydrated to reduce the OH group concentration to 0.8 ppb or less by weight ratio. The porous core rod (1) is formed to be transparent for a vitrified core rod (4) and is heated and stretched. Thereafter, a second cladding is obtained by depositing a second porous cladding (5) around the vitrified core rod (4) by VAD to be dehydrated, transparent and vitrified. The optical fiber preform thus fabricated is drawn to form into an optical fiber and is then allowed to stand in a deuterium gas atmosphere for a predetermined period.